

Anthropometric Changes & Nutritional Deficiencies Following Bariatric Surgery in Geriatric Population: An updated Comprehensive Review

Dr. Farnaz Farsi

Clinical Dietitian in bariatric surgery
Minimally Invasive Surgery Research Center
Iran University of Medical Sciences, Tehran

Email Address: Farnaz.farsi@yahoo.com

Most common bariatric surgeries performed worldwide 2021-2022.

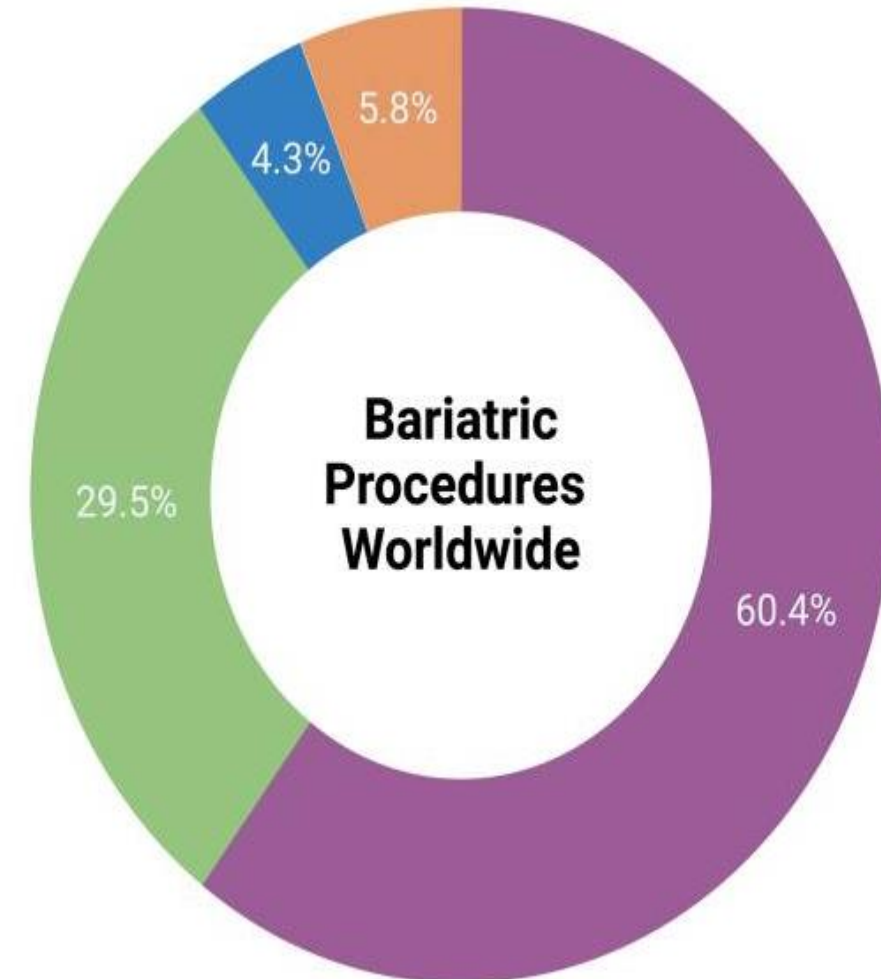
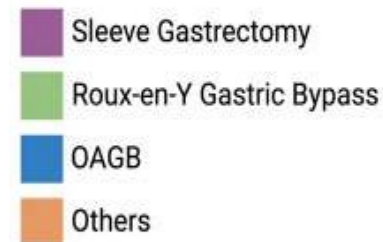


Over the past decade, the frequency of BMS in older adults has increased by three-fold to 10% of the total bariatric procedures performed annually.

While beneficial for weight loss in the geriatric population, can lead to unique anthropometric & micronutrient challenges.



There are some concerns about BMS in this population and the outcomes are still debated and there is a lack of studies due to issues in this age group compared to the younger adults.



[Faiza A Kamal. Cureus. 2024](#)

AIMS & OBJECTIVES

This comprehensive review examines the key anthropometric shifts and micronutrient imbalances observed in geriatric bariatric patients.

✓ I have no potential conflict of interest to report

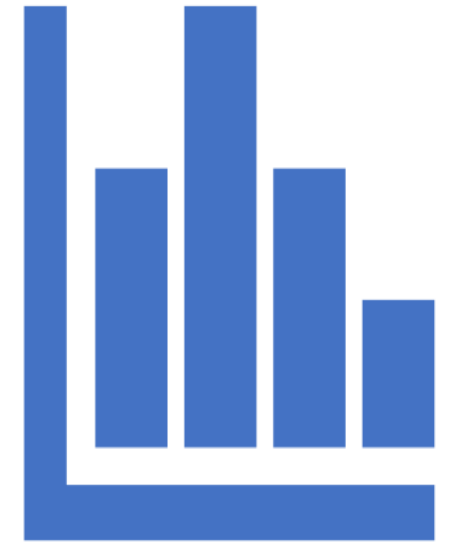
SELECTION OF PATIENTS AND PROCEDURE:

- ❑ Data was sourced from MEDLINE, EMBASE, CINAHL, PubMed, and Cochrane databases for peer-reviewed, randomized controlled trials, and observational studies in the English language were searched up 1 Jan 2024
- ❑ Inclusion criteria were reports on anthropometric and biochemistry parameters, nutritional deficiency of adults aged over 60 years following BMS.



Result

- ❑ After removing duplicates, 617 records met the inclusion criteria for this review & finally 13 relevant articles were utilized for outcomes.
- ❑ Separating the patients into subgroups by age, some studies see that the elderly lose less weight after bariatric surgery.



Physiological Changes in Body Composition

1

Rapid Weight Loss

Significant and rapid weight loss is a common outcome of bariatric surgery, often leading to changes in body composition.

2

Muscle Mass Depletion

Geriatric patients are at higher risk of losing muscle mass (sarcopenia) due to the combined effects of aging and rapid weight loss.

3

Altered Fat Distribution

Bariatric surgery can result in a disproportionate loss of subcutaneous fat compared to visceral fat, potentially impacting metabolic health.

The Impact of Age on the Prevalence of Sarcopenic Obesity in Bariatric Surgery Candidates

Judit Molero¹, Violeta Moizé¹, Lilliam Flores^{1 2 3}, Ana De Hollanda^{1 2}, Amanda Jiménez^{1 2 4},
Josep Vidal^{5 6 7}

The long-term benefits of bariatric surgery in elderly and super-obese populations

371-377

DOI: 10.17235/reed.2019.5917/2018

Linás Martinaitis, Carlota Tuero, Manuel Fortún Landecho, Javier A. Cienfuegos, Rafael Moncada, Fernando

- Prevalence of class I and class II SO was respectively 16.4% and 4.6%.
- Age is a risk factor for SO in BS-candidates.
- SO is fairly common in female subjects aged >60 years that are candidates to BS.
- To assess the long-term benefits of bariatric surgery in super-obese (BMI \geq 50) and in elderly obese (age > 60 years) populations.
- Reduction in BF & increase in FFM were comparable between BMI groups and age groups. GB resulted in a greater weight loss compared to SG.

Changes in Body Composition, Comorbidities, and Nutritional Status Associated with Lower Weight Loss After Bariatric Surgery in Older Subjects

Pauline Faucher¹, Judith Aron-Wisniewsky^{1 2}, Cécile Ciangura¹, Laurent Genser^{2 3},

- ❑ The prevalence of **moderate sarcopenia in the group of RYGB with long loops (LBP: 150 and 100 cm)** was 24.5%, and severe sarcopenia was observed in 3% of the subjects.
- ❑ In the group of **RYGB with short loops (LBP: 100 and 60 cm)**, the incidence of **sarcopenia increased from 13 to 16%** (the difference is statistically insignificant).

Changes in Body Composition, Comorbidities, and Nutritional Status Associated with Lower Weight Loss After Bariatric Surgery in Older Subjects

Pauline Faucher¹, Judith Aron-Wisniewsky^{1 2}, Cécile Ciangura¹, Laurent Genser^{2 3},

- ❑ Weight loss and excess weight loss at 12 months were lower in OP (≥ 60 yrs, n = 93; 66% RYGB, 34% SG) vs. YP (< 60 years, n = 186)).
- ❑ Both lean body mass and fat mass loss were lower in OP vs. YP

Micronutrient Deficiencies Commonly Observed

1 Vitamin B12

Decreased absorption and utilization, leading to pernicious anemia.

3 Calcium

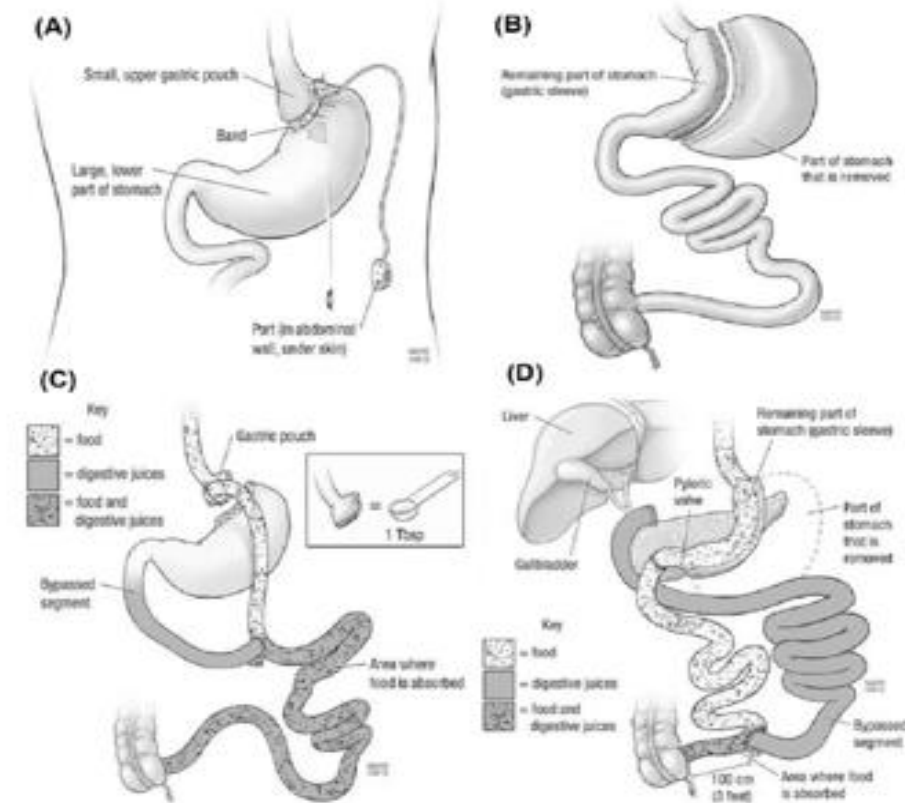
Reduced absorption and increased excretion, contributing to osteoporosis and fracture risk.

2 Iron

Impaired absorption and increased requirements, resulting in iron-deficiency anemia.









4 Vitamin D

Impaired synthesis and decreased absorption, affecting bone health and immune function.



Impact of bariatric surgery in elderly patients with obesity

Impacto da cirurgia bariátrica em pacientes idosos portadores de obesidade

ADRIANO F. PEREIRA¹ ; FERNANDO SANTA-CRUZ¹ ; LUCAS R. COUTINHO² ; MARIA CLARA P. T. VEIRA-DE-MELO² ; EDUARDA A. HINRICHSEN³ ; LUCIANA T. SIQUEIRA⁴ ; JOSÉ-LUIZ FIGUEIREDO⁴ ; ÁLVARO A. B. FERRAZ, TCBC-PE⁴ .

Is Laparoscopic Bariatric Surgery Safe and Effective in Patients over 60 Years of Age?" an Updated Systematic Review and Meta-Analysis

Antoine Vallois¹, Benjamin Menahem^{2 3 4}, Arnaud Alves^{1 5 6}

□ There was **a reduction in BMI and iron, albumin, vitamin B12, and zinc** decreased when comparing the pre & postoperative periods in all patients older than 60 years who underwent RYGB at follow-up longer than 1 year.

□ Weight loss was statistically **greater in young patients (age < = 60 years old) compared with that in patients more than 60 years old)** who underwent BMS.

CONCLUSION

- ❑ There is an inverse correlation between increasing age and %EWL at one year after BMS
- ❑ Lifelong monitoring of anthropometric changes, nutrient status, and overall health is crucial for geriatric bariatric patients.
- ❑ Perhaps, the decision to perform BMS & the measurement of success in older groups should be focused on their comorbidities and lifespan instead of BMI in each individual patient.
- ❑ Goals after bariatric surgery should be individualized

Warm greeting

from team

Iranian Society of Metabolic & Bariatric



XXVII Ifso World Congress



Melbourne 2024



Thank you for your attention

XXVII Ifso World Congress



Melbourne 2024

Questions

